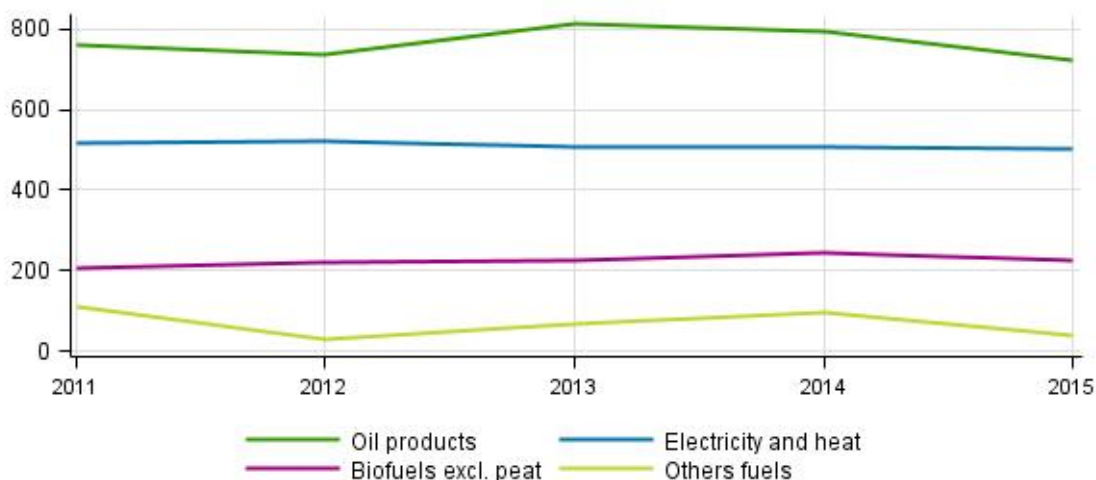


Energy accounts 2015

Manufacturing consumed nearly one-half of energy products in 2015

In 2015, around 2,720,000 terajoules of energy products were consumed in Finland, which is nearly 10 per cent less than in 2011. In 2015, manufacturing consumed 43 per cent of energy products and energy supply 22 per cent, while the share of households was good 10 per cent. The share of oils in consumed energy products was around 50 per cent. These data appear from Statistics Finland's new statistics on energy accounts for the years 2011 to 2015.

Final consumption of energy products in 2011 to 2015, petajoules



The consumption of energy products has varied somewhat over the years. Starting from 2011, total consumption in Finland has been highest in 2011, when around 3,004,000 terajoules (TJ) of energy products were consumed, which is some 284,000 TJ more than in 2015, when consumption was at its lowest. Examined by energy product, the change trend has been clearest in the consumption of natural gas. It has decreased by one third from 2011 to 2015. A decline is also visible in the consumption of hard coal and peat products, while the consumption of biofuels has increased, even though the consumption of both has fluctuated between years. Examined by industry, the consumption of energy products has declined in the petroleum refining and chemicals industry and in energy supply by over 10 per cent from 2011 to 2015. The use biofuels has increased clearly in the forest industry and land transport, while the consumption of oil products has decreased.

Households consumed around 283,000 TJ of energy in 2015. This is the lowest level since 2011. Most energy was consumed in 2012 when, partially due to cold weather, the energy consumed by households was around 301,000 TJ. Of the energy consumed in 2015, oil products amounted to 30 per cent, electricity to 27 per cent, heating to 23 per cent and biofuels to 20 per cent. Of these, electricity and heating are mainly used in housing and oil products in traffic. A majority of biofuels are firewood used in heating. The shares between energy products have not changed much in recent years.

Around 2,720,000 terajoules of energy products were supplied and consumed in Finland in 2015. Of this, around 1,225,000 TJ were consumed in manufacturing and 1,495,000 TJ in final consumption. Most energy products were both supplied and consumed by the petroleum refining and chemicals industry and by energy supply. They covered around 40 per cent of the total supply. Other industries supplied close on 25 per cent of energy products, while the share of imports was good 35 per cent. The above-mentioned industries consumed in total 50 per cent of energy products, while good 10 per cent were exported and the remaining 40 per cent were consumed by other industries and households.

Examined by energy product, oil products were consumed most in 2015, the share of which was around 30 per cent of total consumption. Crude oil represented close on 20 per cent and biofuels around 15 per cent of total consumption. Around 20 per cent of oil products were used in petroleum refining and chemicals industries, over 35 per cent were exported and the remainder was used in other industries and by households. The biggest consumers of biofuels were the forest industry and energy supply, whose combined consumption represented over 70 per cent of the total consumption. While households consumed around 15 per cent of biofuels, less than 15 per cent were consumed by other industries and exported.

Total supply and consumption of energy products by industry in 2015, TJ

Industry (TOL2008)	Supply	Use
Agriculture, fishing and aquaculture, hunting	1 230	29 225
Forestry	187 269	4 309
Mining and quarrying	286 110	6 862
Food industry	244	16 799
Forest industry	142 056	266 710
Oil refining and manufacture of chemicals	642 901	758 593
Manufacture of basic metals and fabricated metal products	14 708	90 975
Other industries	.	27 188
Energy management	429 145	600 568
Water supply and waste management	.	4 329
Construction	.	31 671
Trade	.	21 907
Land transport	.	59 557
Water transport	.	28 509
Air transport	.	44 266
Support activities for transportation, postal activities	.	4 940
Real estate activities	.	16 890
Other service activities and administration	.	77 471
Households	.	282 735
Change in Inventories	.	2 673
Rest of the World	1 016 274	328 996
Statistical Differences	.	14 755
TOTAL	2 719 939	2 719 939

These data appear from Statistics Finland's new statistics Energy accounts, for which results are now published for the first time. Energy accounts are part of the second stage of the European Union's Regulation concerning environmental accounts that became legally valid in June 2014 ((EC) No 538/2014). The Regulation obliges the Member States to compile statistics and report annually on energy accounts; for the first time in 2017 regarding at least the statistical reference years 2014 and 2015. The Energy accounts time series published by Statistics Finland in October 2017 covers the years 2011 to 2015.

The goal of environmental accounts is to describe the interaction between the environment and the economy by mainly using the same basic concepts and classifications as national accounts (ESA 2010). In the energy accounts, the supply and use of energy are presented in accordance with the industrial classification and domicile principle used in national accounts. Thus, the data of the statistics can be connected to various monetary variables of national accounts, such as total output and value added. The energy accounts' data on the supply and use of energy can also be combined with the data of the statistics on environmental taxes and emissions into air by industry.

Unlike other statistics on energy, energy accounts also contain the supply and consumption of energy by Finns abroad, in accordance with the framework of national accounts. Correspondingly, the supply and consumption of energy by foreigners within Finland are subtracted from energy accounts. Unlike in national accounts, statistics describing the physical flows of environmental accounts, including energy accounts, do not take into account global factoryless production and merchanting.

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Appendix tables

Appendix table 1. Households' total consumption of energy products in 2011 to 2015, TJ

	2011	2012	2013	2014	2015
Total fuels	286 779	300 913	288 111	289 161	282 735
Hard coal and peat products	235	235	198	184	150
Oil products	87 671	87 888	86 527	86 762	86 062
Bio fuels excl. peat	57 188	61 249	55 748	58 565	55 333
Natural gas (without bio)	1 295	1 395	1 233	1 200	1 100
Electrical energy	77 133	80 575	77 436	76 553	75 311
Heat	63 255	69 570	66 969	65 894	64 777

Appendix table 2. Final consumption of energy products in 2015, TJ

	Total fuels	Hard coal and peat products	Oil products	Bio fuels excl. peat	Crude oil, NGL, and other hydrocarbons (excl. bio)	Natural gas (without bio)	Nuclear fuel	Electrical energy	Heat
Agriculture, fishing and aquaculture, hunting	29 225	1 425	14 858	6 927	.	37	.	5 472	504
Forestry	4 309	.	4 198	110	.	.	.	0	.
Mining and quarrying	6 862	.	2 382	50	.	.	.	4 320	110
Food industry	16 799	714	2 101	407	.	749	.	6 210	6 617
Forest industry	266 710	8 581	7 248	141 926	.	17 185	.	70 335	21 432
Oil refining and manufacture of chemicals	758 593	40 078	170 363	22 926	467 608	20 327	.	24 264	13 025
Manufacture of basic metals and fabricated metal products	90 975	43 638	13 153	15	.	2 445	.	24 353	7 368
Other industries	27 188	2 749	6 800	358	.	1 646	.	10 328	5 305
Energy management	600 568	115 507	11 379	133 781	.	49 139	251 046	18 500	21 214
Water supply and waste management	4 329	2	1 919	419	.	33	.	1 800	154
Construction	31 671	.	28 968	1 363	.	.	.	1 339	.
Trade	21 907	17	1 880	892	.	228	.	12 248	6 639
Land transport	59 557	2	44 702	9 532	.	171	.	4 501	647
Water transport	28 509	1	27 191	178	.	14	.	760	364
Air transport	44 266	0	42 972	359	.	12	.	645	275
Support activities for transportation, postal activities	4 940	4	595	160	.	55	.	2 987	1 136
Real estate activities	16 890	9	1 115	431	.	123	.	6 625	8 585
Other service activities and administration	77 471	50	18 183	4 595	.	656	.	35 255	18 730
Households	282 735	150	86 062	55 333	.	1 100	.	75 311	64 777
Change in Inventories	2 673	30 385	14 210	.	18 848	.	0	.	.
Rest of the World	328 996	3 808	305 001	1 738	.	9	.	18 439	.

	Total fuels	Hard coal and peat products	Oil products	Bio fuels excl. peat	Crude oil, NGL, and other hydrocarbons (excl. bio)	Natural gas (without bio)	Nuclear fuel	Electrical energy	Heat
Statistical Differences	14 755	4 704	13 941	127	5 209	27	0	498	720
TOTAL	2 719 939	191 063	819 231	381 636	481 247	93 909	251 046	324 196	177 609

Appendix table 3. Final consumption of oil products in 2011 to 2015, TJ

Industry (TOL2008)	2011	2012	2013	2014	2015
Agriculture, fishing and aquaculture, hunting	16 990	17 207	16 941	15 100	14 858
Forestry	4 260	4 246	4 368	4 256	4 198
Mining and quarrying	2 479	2 610	2 585	2 419	2 382
Food industry	2 385	2 380	2 158	2 037	2 101
Forest industry	7 375	6 700	6 372	5 957	4 828
Oil refining and manufacture of chemicals	711 147	685 748	686 138	661 623	596 246
Manufacture of basic metals and fabricated metal products	16 598	11 926	9 392	8 617	11 529
Other industries	4 537	4 374	4 080	4 153	3 673
Energy management	14 340	14 173	9 450	10 000	11 102
Water supply and waste management	1 726	1 864	2 042	1 935	1 919
Construction	22 289	21 782	23 516	20 121	20 427
Trade	1 619	1 783	1 619	1 992	1 880
Land transport	59 785	62 221	55 263	44 901	44 702
Water transport	33 550	34 141	31 234	25 367	27 191
Air transport	41 024	35 770	41 502	41 176	42 972
Support activities for transportation, postal activities	435	468	589	691	595
Real estate activities	1 509	1 382	1 129	1 175	1 115
Other service activities and administration	19 060	17 780	19 105	18 844	18 183
Households	87 671	87 888	86 527	86 762	86 062
Change in Inventories	1 480	7 605	29 931	6 870	27 826
Rest of the World	286 935	306 620	372 072	347 485	282 070
Statistical Differences	25 820	1 267	4 692	52 238	25 328
TOTAL	1 363 023	1 314 734	1 401 331	1 349 990	1 231 197

Appendix table 4. Final consumption of biofuels (excl. peat) by industry in 2011 to 2015, TJ

Industry (TOL2008)	2011	2012	2013	2014	2015
Agriculture, fishing and aquaculture, hunting	5 674	6 862	7 694	7 205	6 470
Forestry	0	0	0	0	0
Mining and quarrying	14	45	56	37	50
Food industry	275	259	246	330	407
Forest industry	125 445	127 646	131 469	138 760	141 926
Oil refining and manufacture of chemicals	719	672	575	408	349
Manufacture of basic metals and fabricated metal products	3	3	11	17	15
Other industries	391	433	472	406	355
Energy management	133 421	139 287	146 990	141 104	133 428
Water supply and waste management	178	206	121	105	93
Construction	0	0	0	0	0
Trade	572	818	729	708	636
Land transport	69	131	109	117	102
Water transport	15	42	37	41	39
Air transport	15	34	36	38	33
Support activities for transportation, postal activities	230	247	195	196	155
Real estate activities	713	450	409	391	344
Other service activities and administration	1 626	2 144	1 928	2 018	1 831
Households	52 961	57 200	52 398	53 064	50 043
Rest of the World	2 646	1 497	1 888	1 649	1 738
Statistical Differences	134	170	192	117	82
TOTAL	324 840	337 812	345 178	346 483	337 938

Appendix table 5. Final consumption of electricity and heat by industry in 2011 to 2015, TJ

Industry (TOL2008)	2011	2012	2013	2014	2015
Agriculture, fishing and aquaculture, hunting	5 768	6 219	5 907	6 030	5 976
Forestry	.	.	.	0	0
Mining and quarrying	4 108	5 143	5 238	5 064	4 430
Food industry	11 818	11 104	11 853	12 367	12 827
Forest industry	111 329	106 054	101 972	92 969	91 768
Oil refining and manufacture of chemicals	39 002	40 735	40 240	37 170	37 289
Manufacture of basic metals and fabricated metal products	28 540	25 857	27 154	29 835	31 721
Other industries	16 024	17 195	16 803	17 673	15 633
Energy management	47 772	48 867	42 767	42 137	39 714
Water supply and waste management	3 492	3 466	2 309	1 988	1 954
Construction	1 256	1 324	1 360	1 558	1 339
Trade	15 840	22 313	21 388	19 798	18 888
Land transport	4 070	5 549	5 471	5 357	5 148
Water transport	608	1 136	1 105	1 107	1 124
Air transport	347	931	1 005	993	921
Support activities for transportation, postal activities	5 413	4 911	4 284	4 718	4 124
Real estate activities	23 151	14 955	16 329	16 553	15 210
Other service activities and administration	51 968	57 331	55 245	56 007	53 985
Households	140 388	150 145	144 405	142 447	140 088
Rest of the World	13 694	5 922	6 753	13 158	18 439
Statistical Differences	8 537	7 274	3 324	1 094	1 219
TOTAL	516 061	521 890	508 270	508 031	501 805

Appendix table 6. Final consumption of other energy products by industry in 2011 to 2015, TJ

Industry (TOL2008)	2011	2012	2013	2014	2015
Agriculture, fishing and aquaculture, hunting	2 071	2 220	2 234	1 606	1 463
Food industry	2 261	2 221	1 874	1 797	1 464
Forest industry	29 738	27 804	27 746	27 189	25 767
Oil refining and manufacture of chemicals	65 089	64 637	64 673	62 941	60 405
Manufacture of basic metals and fabricated metal products	47 130	43 312	44 993	46 241	46 084
Other industries	6 547	4 858	4 601	4 595	4 396
Energy management	518 628	465 428	488 246	455 244	415 692
Water supply and waste management	84	75	52	39	36
Trade	271	300	315	262	245
Land transport	357	366	291	294	173
Water transport	7	15	16	15	15
Air transport	7	12	15	14	12
Support activities for transportation, postal activities	109	90	84	73	59
Real estate activities	338	165	177	145	132
Other service activities and administration	771	787	832	748	707
Households	1 530	1 630	1 431	1 385	1 251
Change in Inventories	11 968	39 417	3 514	30 321	30 385
Rest of the World	1 653	2 190	2 268	2 223	3 818
Statistical Differences	15 591	1 894	582	6 451	4 677
TOTAL	704 158	574 809	635 757	628 688	536 019

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Source: Energy Accounts 2015, Statistics Finland